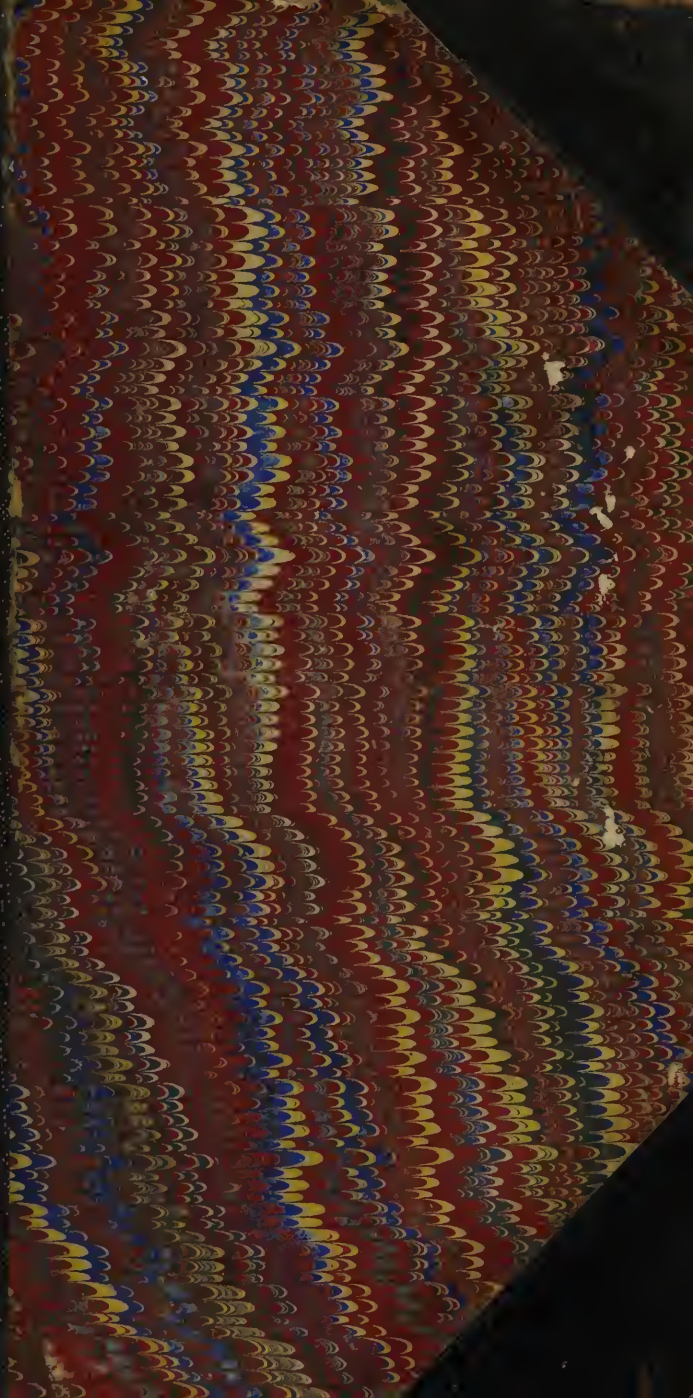

RETINITIS NYCTALOPICA.

BY

Ferdinand
PROF. DR. ARLT, OF VIENNA.

FROM "DER BERICHT UEBER DIE AUGENKLINIK."

TRANSLATED, WITH CONSENT OF THE AUTHOR, BY
J. F. WEIGHTMAN, M.D., OF PHILADELPHIA.

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Persons suffering with this affliction, complain of *diminution in the sharpness of sight*, and of a *blinding in bright daylight*. They assert that they cannot see objects at a distance well, and are unable to distinguish the countenances of those who are only a few paces from them. They express tormenting feelings of constant blinding, or declare that they feel decidedly relieved after sunset, on a cloudy day, or in the moonlight, so that they are then made sure of seeing quite well or decidedly better. Many described the obstacle to the recognition of distant objects as the gradual vanishing of a thin mist, while others again as a trembling or flickering of a stratum of air, as if over a strongly heated chimney. Some noticed that they could not recognize acquaintances, because their faces appeared grayish or faded and indistinct, although but one or two yards distant.

The employment of the test-type in these cases, shows in general only a moderate diminution in the central sharpness of sight. Of thirty-three such patients, three still read No. 3 or 4 of the test-type of Jaeger. Only two could not read No. 16, but Nos. 18 or 20; the majority, however, read No. 11 or 14. The degree of the disturbance of sight does not stand in general, exactly in relation to the duration of the evil, for, at least with some, a duration of eight or ten months, did not absolutely exclude the reading of No. 3, while others, who sought medical assistance, after three or four months, could perhaps only read Nos. 8 or 9.

The diminution of the sharpness of sight extended uniformly over the whole field of vision, and it was not possible to find either an interruption or limit to it. In all cases the disturbance of vision made itself first noticeable by looking at distant objects, and later, in reading and writing.

In all cases both eyes were affected at the same time and in an equal or only slightly different degree. The test-type gave at most only a difference of three or four degrees, and only in two cases where a difference existed

could there be found, by means of the ophthalmoscope, a consistent difference in the retina.

Externally there was nothing abnormal to be seen as regards the appearance of the globe, except that with some there existed a somewhat stronger injection of the anterior ciliary arteries than normal, but not of such a nature that special weight could be laid upon it. The pupils were in general narrow, but in no case were they abnormally large. The tension of the globe was normal, while in the look, physiognomy or manner of the patient nothing peculiar could be observed.

By examination with the ophthalmoscope the dioptric media appeared clear. The conditions in which the optic nerve and retina were found differed according to the degree, and, indeed, according to the duration of the affection, and during the time of observation I could often perceive changes. The papillæ appeared at the time of the first examination to have a decidedly increased redness, but in some, on the contrary, they presented a diminished redness, while in others it was not possible to speak with certainty. In many cases the abnormal injection in the region of the optic nerve and retina was lost during obser-

vation and treatment, while in many there appeared even an abnormal paleness of the papillæ. Distinct inflammatory changes of the retina could only be observed, in ten cases, either at the commencement of observation or in the further course of the affection. These consisted of a veiling, uniform or striped cloudiness of the retina only in the papillæ or towards the equator. In these cases the border between the papillæ and retina was more or less indistinct, but I never saw distinct swelling of the papillæ or bright points, spots or ecchymoses on the retina. It may indeed be accepted that hyperæmia and inflammatory changes were present in the beginning of all cases. That they were not noticed in many cases was because they had in general reached so slight a degree as to escape observation in the upright image, or because at the time of observation had already disappeared to such an extent as not to be recognized.

The course in general is a long one. The disturbance of vision is generally suddenly noticed, and remains for a long time the same, or gradually increases without visible oscillations up to a certain degree, at which it may remain months or years without going on to

total blindness, but the last I have never been able to observe. It cannot be said that in cases of two or three years' standing the prognosis has been as proportionately unfavorable as after a short duration, for even in cases where the papillæ already presented a pale, yellow look, and the central arteries appeared to have a somewhat smaller calibre, I have seen perfect cures take place, still all my patients have not given themselves up to treatment with the proper endurance. Only in high degrees of visual disturbance does the duration appear to be tedious, and a perfect cure is not to be expected of those who cannot read No. 16. In the case of a merchant from Hungary, who estimated the continuance of the affection for nearly three years, and who could read No. 4, although with difficulty, and presented a slightly reddened papillæ, and slight cloudiness of the retina, in the beginning of October, 1862, I found about the middle of February, although he had not taken mercury, but had followed a dietetic course, the papillæ decidedly paler, the retina unclouded, the veins somewhat broader, and the power of sight so much improved that he could read Jaeger No. 2. In a letter on the 18th

of March, 1863, he informed me that his sight for distance had decidedly improved, after he had taken a course of mercury. Since that time I have received no further information from him.

This affection does not occur very frequently, because I have counted since first making the diagnosis, one case in every nine hundred or thousand of all patients which I have seen yearly. It is not accidental that I have heretofore found it exclusively among men, for it depends most probably on the mode of living and occupation. The youngest patient was twenty-three and the oldest fifty-seven years of age. None were remarkably myopic, two strongly hypermetropic, and many more or less presbyopic, yet there was no other disease with which the affection could be brought in relation. According to the position or occupation there were among the thirty-three patients of private practice, fourteen officers, including one regimental surgeon, seven merchants or shopkeepers, three hotelkeepers, two government officers, one postmaster, one miner, one weaver, and of the remaining four patients the occupation was not ascertained. Relatively great is the

number of those who come from Hungary, eleven; or in Austrian-Italy, five; while from Vienna there came only seven, and from other parts of Austria only one or two, or none at all. In regard to the question as to the cause of the affection, I received for the most part either no information at all or that which was unreliable or improbable. I mean, however, from those who came before me; but from the histories of some patients, and my own therapeutical experience, may be deduced the assumption that the cause of this affection is blinding by bright, reflected or diffused sunlight, and refers in this relation to the appended histories and to the notices of treatment.

It has occurred that this affection has been considered as *cataract* or *glaucoma simplex*. It may also be confounded with *atrophy* of the optic nerve and other forms of retinitis. From *cataract* it may be diagnosticated with certainty if the eye is carefully examined and the pupil dilated in necessary cases, from the fact that cataract indeed *never* begins at the *same time* and in the *same degree* in both eyes, and that the disturbance of vision by the opacity must be proportional. In cases

of cataract, where the patient can still read Nos. 4 or 6, it must be diagnosticated, if not by direct light certainly by transmitted, for it does not allow the eye-ground to be seen with certainty, distinctly in all directions. It may be taken for *glaucoma simplex* if the papillæ appear paler, and the veins within the limit of the retina broader. But glaucoma *does not affect both eyes at the same time and in equal degree*, for distinct variations in the disturbance of vision are observed, putting aside the increased tension of the *ball* and sometimes startling attacks of pain, otherwise it will not be found with glaucoma that the central sharpness of sight is materially lowered without the peripheral appearing increased or unproportionately diminished. Should it be considered, after ophthalmoscopic examination, as an atrophy of the optic nerve, so would therefore the proving of the sight in relation to the *limit*, *interruption* and *inequality* of the capacity of reception present an important means of deciding. Cases not of this kind should give, as the affection appears and progresses, and further symptoms present themselves, a sufficient means for diagnosis. Of other forms of retinitis I will next refer to

that which is produced in consequence of blinding by direct rays of light, or those reflected from a glistening surface. In those cases which I have seen there existed either a general, with occasionally appearing violent inflammatory affection of the retina, or it was limited to the macula lutea, and left behind for a long time, or permanently, a greater or lesser defect in the field of vision. From several patients who had seen, by reason of a partial obscurity of the sun, with unprotected eyes, during daylight, there was a symptom given which appears only to occur in cases of a high degree of myopia, with changes in the fovea centralis, viz., a crooked or broken appearance of lines in the centre of the field of vision. The form of retinitis which is caused by syphilis, and that which appears with morbus Brightii, present as a rule such characteristic ophthalmoscopic appearances that they make themselves apparent from the general affection, and existing doubts may always be removed by more carefully examining the history and whole present state of the patient. There occur sometimes cases of inflammatory affection of the retina which it is impossible to arrange

under any of the known forms, and with which no decision in regard to the ætiological relations can be reached. Of these I might distinguish those cases which it is legitimate to view as Retinitis Nyctalopica, because with this distinction exact rules for treatment are given, and particularly as to the prognosis.

The treatment demands, next to rest of the eye, the removal of all occupation which necessitates the long fixing of the eye on an object and more or less straining of the accommodation. The patients must be earnestly warned against trying their sight, to which they are so easily induced by impatience and anxiety dependent on the long continuance of treatment. They must allow themselves to be satisfied that the physician examines and carefully notes the sight from time to time. In the greater number of cases the improvement is shown by the decreased sensibility to bright daylight and by the better perception of distant objects. The second consideration is the tempering of the light. I considered it necessary to protect the eye for some time from all light, either by bandaging the eye or confinement in a dark room. It is sufficient to keep the patient in a moderately

dark room, and on going out to protect the eyes by means of smoke-gray glasses. To all is the wearing of dark glasses comfortable; they assert that they see better than without them; some prefer the blue glasses, others the smoke-gray. The *mussel-shell* or *watch-glass* form, of such a size as to cover the orbital openings, are much to be preferred, especially when they have side pieces, as the result depends on the equal protection of the whole field of vision. I have seen several patients spontaneously cured either by only observing the previously given condition, or with the assistance of a light cooling aperient.

In the greater number of cases I have commenced the medical treatment by placing behind each ear eight to ten leeches, and afterwards ordered the patient to remain quietly for some days in a moderately darkened room. If I obtained no evident results from this means I considered it necessary to continue the previous treatment. In a few cases I repeated the local bleeding from time to time.

As a proper means of cure I can only declare for a methodical course of mercury, and it is true I have either used corrosive sublimate pills in increasing doses, or the mer-

curial inunction for three or five weeks, repeated after a long pause, and followed by iodide of potassium.

Seventeen of the thirty-three patients were cured, and nine were relieved when they went from under treatment; the others presented themselves only a few times and then remained away. In no case did it occur that after long treatment I could say there had been nothing gained; only in two cases could I at the very commencement not promise much.

Cases.

Case I.—The first of the contained observations I described in my work on Diseases of the Eye, which appeared in Prague in the year 1856.* This man, with whom the affection had lasted one year, and the optic nerve on both sides had become decidedly pale before effective medical treatment had been adopted, and in whose condition a decided improvement began after a repetition of the mercurial course, July, 1855, recovered perfectly in a few months under rigid diet, so that he

* Krankheiten des Auges, pp. 114, 116.

was able to read Jaeger No. 1 in November of the same year. This result remained unchanged until March, 1856, when this otherwise apparently healthy man died from an attack of pleuro-pneumonia, consequent on catching cold.

Case II.—Lieut. K., aged 23, was affected in the beginning of May, 1856. As he was walking one morning in the court-yard of the barracks, about half-past five in the morning, on standing before his men he noticed suddenly a mist before his eyes, and, although but a few paces distant, was unable to recognize a single face. The sun did not shine in the court. When he marched out to drill through the streets, in the sunshine, this mistiness became much worse, and reached its highest point on the parade ground during the exercise; the light blinded him to such an extent that he did not know how to act. In the shade, and especially, however, in the evening, the blindness was much relieved. This reassured him, so that he waited for three weeks, thinking it would pass off. When at the expiration of this time he came to me, I found, besides hyperæmia in the region of

the papillæ and retina, nothing abnormal. He was directed, as an officer, to the military hospital. Here he was ordered leeches on the temples, application of cold to the eye, and to avoid bright light. The patient attended to this as well as it was possible for him to do while performing his duty. He was then advised to enter the garrison hospital, but this the patient was unwilling to do, so he obtained a furlough in June, and asked once more to be placed under treatment. I declared the tempering of the light and use of mercury absolutely necessary, but as the patient could not make up his mind to the latter he went to some relatives in Prague, in order to be treated there. He was ordered warm foot-baths with ashes, mercurial ointment on the brow and temples, with mineral water (Giesshübler), and at the same time he should remain as much in the open air as possible, and especially where it was green, but avoid all sunny places. He soon found that remaining in the open air did not agree with him, because if he sat in the shade he was unable to prevent his gaze resting on some sunny spot, which always made his eyes more sensitive. At length he concluded to return to Vienna, and

on the 26th of August presented himself with the declaration that he was now ready to submit to treatment. I found at this time the papillæ slightly obscured, the vessels covered as by a thin mist, the borders of the papillæ not sharp but indistinct, and the remainder of the retina, as far as could be seen, free from all haziness. The treatment consisted in confining the patient to a moderately darkened room, avoidance of all and every occupation, and every five or six days local bleeding, followed by the application of cold for several hours, and corrosive sublimate in increasing doses, according to Hoffman. In case of constipation, purgative mineral water was used, and the same treatment continued by the assistant during my absence. After the pills had been increased to nine a day, signs of salivation appeared, and only the diabetic treatment was continued. About the end of September he read before the assistant the finest print of a bank-note, in order to show how well he could see. After he had once very imprudently exposed himself to bright sunlight, he was unable to read Jaeger No. 8. On examining with the ophthalmoscope scarcely a single trace of cloudiness could be found in

the retina. He was again kept in a darkened room for four weeks without medicine, except perhaps a Seidlitz powder or mineral water (Giesshübler). At first he was only allowed to go out towards evening, and then gradually earlier, but always provided with dark glasses. At the end of December he was able to lay aside the glasses, and remained afterwards perfectly well. He now saw distant objects as well as before, and could read readily Jaeger No. 1.

Case III.—Regimental Surgeon G. imparted to me the following information: "In November, 1858, I suffered from rheumatism in the muscles of the neck. Later, about the winter of 1860, I suffered often from headache, which, as I now believe, was also primarily rheumatic. The cause of the affection of my eyes may indeed have been produced by the constant wearing of uniform during the Italian campaign, in 1859, as the narrow shield on the caps afforded but slight protection to the eyes from the bright sunlight. Once as I stepped from the hospital building in Verona into the light-gray shade of the court-yard, I was so unpleasantly affected by

the light that I was forced unwillingly to place my right forearm on my brow. I did not perceive any disturbance of vision until the month of September, when one morning, on going out, I suddenly saw everything as if my eyes were full of tears, but rubbing did not change it in the least. In November, sometimes phosphenes presented themselves, and during the day all distant objects appeared as if veiled by a mist. I noticed first the decrease in the power of sight in the month of February. I tried on this account, as I had already passed my forty-fifth year, to obtain assistance from convex glasses, which, however, only afforded me relief for fourteen days, so that in the beginning of March I could no longer read, and only do the most necessary writing. Then all faces appeared to me gray or dark yellow. In the evening I was able to take part in a whist party, as a kerosene light did not affect my sight, but in the day was unable to recognize persons two or three paces distant. Sensibility to artificial light or red or yellow colors by daylight, I noticed first on my arrival in Vienna. Pains in the eyes or forehead were never present." When this patient was seen

in the beginning of April, 1860, he was very low-spirited, as a colleague had pronounced it beginning glaucoma. He could only read Jaeger No. 14 as well with the one eye as with the other; was very sensitive to daylight, and was unable to recognize persons only a few paces distant. The ophthalmoscopic examination gave nothing abnormal, besides a somewhat slight reddening of the papillæ and greater breadth of the veins. I pronounced decidedly for Retinitis Nyctalopica, and the patient readily complied with my treatment. However, I promised a recovery only after months of treatment. The treatment consisted partly in tempering the light, by remaining at home on sunny days, partly in wearing smoke-gray, and later, blue glasses, and from time to time leeches and mineral water (Saidschützen), with moderately rich nourishment and rest; these were the means upon the effects of which I relied. After the lapse of three or four weeks the trembling mistiness of objects in the open air disappeared, and No. 11 was read. On the contrary to this, there appeared sensibility to gaslight, and in daylight to red and yellow colors. In June the patient still noticed that

when he laid aside the blue glasses every face appeared deathly pale. The phosphenes were gradually lost, although not entirely. In July he was able to recognize the figures and hands of the steeple clocks, and read all the test-types of Jaeger. From this circumstance he requested a renewal of his furlough. Since then he has visited me as often as he came to Vienna; the last time was in the autumn of 1865. The cure is perfect and permanent.

Case IV.—In conclusion I should like to note still another case, which appears to me, in regard to the cause, worth mentioning: J. K., aged 27, weaver by trade, at present without employment, presented himself to me on the twelfth of January, 1866, on account of bad sight, which had continued since the previous August. He stated that during the day he saw as if through a slight mist, especially in the sunshine, or when he did not have the sun behind him. In the evening, on the other hand, and on dark days, he was comfortable. Even the light of the street lanterns was very disagreeable, but by kerosene light he had good sight, if not the same as before. He noticed particularly in reading

musical notes, when he employed himself by copying music, that he recognized the notes but not the different signs. In my presence, on a cloudy day, he read No. 16, and with trouble No. 13, but in reading the eyes soon pained him. Both eyes were the same. Ophthalmoscopic examination showed, besides strong redness of the papillæ and distinct spreading of the veins, nothing abnormal. In regard to the question, with what he had occupied himself at the time of the commencement of the affection, he answered that he had exerted himself to such an extent, by cutting out muslin window curtains, as to perspire freely, thereby most probably catching cold. He was obliged in this work to look at a white gauze-like stuff, spread out before a bright window, cutting from it with one hand and with the other turning a heavy wheel. It may well be accepted that the bodily exertion and catching cold were not the causes of the eye affection, but blinding by diffused light. The young man was advised to enter the clinic, but as yet he has not made his appearance.

I have given this subject here somewhat at length, because earlier descriptions of it ap-

pear to have been overlooked. From a clinical point of view, I hold it not only as proper, but also as necessary, to consider this affection as a distinct form of retinitis. I have chosen therefore the adjective "*nyctalopica*" as a special name, because the bad sight in daylight forms a prominent symptom, and in those cases where inflammatory changes in the retina are not manifest this peculiarity of the functional disturbance presents the principal support for the diagnosis. However, for the cases of distinct inflammatory retinal changes, further investigation will show that for clinical instruction it does not suffice to treat of these cases under the general head of "*retinitis diffusee*," but that here a special name appears advisable.

Dr Jas. H. Hutchinson
Compliments of
Translator.

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